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EXAMINER	
WILLOUGHBY, TERRENCE RONIQUE	
ART UNIT	**PAPER NUMBER**
2836	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/564,574	PIASECKI ET AL.	
	Examiner	Art Unit	
	TERRENCE R. WILLOUGHBY	2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 October 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Applicant's amendment filed on October 15, 2008 has been entered. Accordingly no new claims were added. Claim 9 has been amended. Claims 1-14 remain currently pending in this application. It also includes remarks/arguments

Claim Objections

Claim 9 objection is withdrawn based on the amendment and remarks filed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peiser et al. (DE 1265836) in view of Schempp (US 4,794,948).

Regarding claims 1 and 8, Peiser et al. in (Fig. 1) discloses a protecting system for three single phase transformers having three auxiliary secondary windings that are connected to form an open delta configuration the protection system comprising:

an attenuating resistor (R) connected into the open-delta configuration of three auxiliary second windings (wr3, ws3, wt3) of the three single-phase transformers (Wr,

Ws, Wt), which is deactivated by at least one of the protective switching devices (rr, rs, rt) when a relaxation oscillations occurs to prevent thermal destruction of the voltage transformers and attenuating resistor (R). The protective switching devices (rr, rs, rt) are connected in series between the output (U) of the auxiliary secondary winding (wr3, ws3, wt3) and one of the single-phase transformers (Wr, Ws, Wt) and the attenuating resistor (R). See pages 6-8.

Peiser et al. does not disclose that either one of the protective switching devices (rr, rs, rt) is a thermal fuse and is connected in series with an element with a threshold voltage and current characteristic.

However, Schempp in (Fig. 1), discloses a protection circuit comprising a thermal fuse (i.e. PTC , 21) connected in series with an element with a threshold and current characteristic (i.e. LED diode , 23) and a resistor (25) at the output winding (14) of a solenoid (28) device. See col. 2, ll. 10-25 and ll. 40-49.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the protective switching devices of Peiser et al. with the protective circuit including the thermal fuse, diode and resistor as taught by Schempp, in order to provide a reliable and more sensitive fault protection circuit than the protective switching devices (rr, rs, rt) of Peiser et al., which will become less reliable and sensitive to detecting overcurrent faults due to the mechanical wear and tear of the contacts.

Claims 2-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peiser et al. (DE 1265836) in view of Schempp (US 4,794,948) as applied to claims 1 and 8 above, and further in view of Streater (US 3,467,903).

Regarding claim 2, Peiser et al. in view of Schempp discloses the protecting system of claim 1, except for wherein the thermal fuse comprises a bimetallic circuit breaker, and the element with a threshold voltage and characteristic comprises two zener diodes push-pull connected with one another.

However, Streater in (Fig. 9) discloses a thermal fuse in the form of a bimetallic circuit breaker (69), and a element with a threshold voltage and characteristic having the form of two zener diodes (72,73) configured in a push-pull connection with one another.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the bimetallic circuit breaker and the two zener diodes configured in a push-pull configuration as taught by Streater in the protective system device of Peiser et al. and Schempp to provide a much simpler and reliable thermal protective circuit.

Regarding claim 3, Peiser et al. in view of Schempp and in view of Streater discloses the system of claim 1, wherein the thermal fuse (Streater, Fig. 10, 79) comprises a PTC resistor (Streater, Fig. 10, 81), and the element with a threshold voltage and current comprises two zener-diodes (Streater, Fig. 9, 72, 73) in a push-pull connection with one another.

Regarding claim 4, Peiser et al. in view of Schempp and in view of Streater discloses the system of claim 1, wherein the thermal fuse is a PTC resistor (Streater, Fig. 10, 81), and the element with a threshold voltage and current comprises a varistor (Streater, , Fig. 9, 71).

Regarding claim 5, Peiser et al. in view of Schempp and in view of Streater discloses the system of claim 1, wherein the thermal fuse is a thermal fuse in the form of a bimetallic circuit breaker (Streater, Fig. 9, 69), and the element with a threshold voltage and current characteristic is a varistor (Streater, Fig. 9, 71).

Claims 6-7 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peiser et al. (DE 1265836) in view of Schempp (US 4,794,948) as applied to claims 1 and 8 above, and further in view of Robel et al. (US 5,939,839).

Regarding claim 6, Peiser et al. in view of Schempp discloses the system of claim 1, except for wherein a second resistor is connected in parallel with the thermal fuse and the element with a threshold voltage and current characteristics.

However, Robel et al. in (Fig. 3), discloses a second resistor (3) connected in parallel with a thermal fuse (5) and an element (1, 4) with a threshold voltage and current characteristics.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the protective switching device of Peiser et al. in view of Schempp by incorporating a second resistor connected in parallel with a thermal fuse and an element with a threshold voltage and current characteristics as taught by

Robel et al. to provide a protection circuit against high temperatures by arranging a current limiting resistor connected in parallel to the PTC resistor thereby controlling the current through the circuit to a safe level in the case of high operating temperatures.

Regarding claim 7, Peiser et al. in view of Schempp and in view of Robel et al. discloses the system of claim 6, except for wherein the second resistor (Robel et al., Fig. 3, (3)) has a larger resistance than the attenuating resistor (Peiser et al., Fig. 1, (R)).

However, it would have been obvious to one of ordinary skill in the art the time the invention was made to have set the second resistor (Robel et al., Fig. 3, (3)) having a much larger resistance than the attenuating resistor (Peiser et al., Fig. 1, (R)) because otherwise a substantial voltage drop would be developed across the attenuating resistor (Peiser et al., Fig. 1, (R)) and a much smaller voltage would drop across the parallel connected second resistor (Robel et al., Fig. 3, (3)) and the PTC (Robel et al, Fig. 3, (5)) accordingly changing the PTC resistance would have very minor even negligible affect on a value of current. The ratio between the attenuating resistor (Peiser et al., Fig. 1, (R)) and the second resistor (Robel et al., Fig. 3, (3)) is a result effective variable (i.e. variable setting a control gain value of the PTC as was discussed above, therefore it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. **In re Boesch, 617 F. 2d 272, 205 USPQ 215 (CCPA 1980)**. Additionally, the series connected resistor (i.e. the first resistor/attenuating resistor) should not have a higher value than the second resistor (i.e. parallel connected)

because otherwise the current control elements (i.e. .R1, R2) would dissipate more power than the consumer (i.e. load) received which will be counter-productive.

Regarding claim 9, Peiser et al. in view of Schempp and in view of Robel et al. discloses the system of claim 8, wherein the resistor is a first resistor (Peiser et al., Fig. 1, R) and the circuit comprises two legs in parallel, the first leg including the thermal protection device (Robel et al., Fig. 3, (5)), the attenuating resistor (Peiser et al., Fig. 1, R) and the element with a threshold voltage and current characteristic (Schempp, Fig. 1, (23)), and the second leg including a second resistor (Robel et al., Fig. 3, (3)).

Regarding claim 10, Peiser et al. in view of Schempp and in view of Robel et al. discloses all the limitations recited above in claim 7.

Claims 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peiser et al. (DE 1265836) in view of Schempp (US 4,794,948) and in view of Robel et al. (US 5,939,839) as applied to claim 10 above, and further in view of Streater (US 3,467,903).

Regarding claim 11, Peiser et al. in view of Schempp and in view of Robel et al. discloses the protecting system of claim 10, except for wherein the thermal fuse comprises a bimetallic circuit breaker, and the element with a threshold voltage and characteristic comprises two zener diodes push-pull connected with one another.

However, Streater in (Fig. 9) discloses a thermal fuse in the form of a bimetallic circuit breaker (69), and a element with a threshold voltage and characteristic having

the form of two zener diodes (72,73) configured in a push-pull connection with one another.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the bimetallic circuit breaker and the two zener diodes configured in a push-pull configuration as taught by Streater in the protective system device of Peiser et al. mentioned combination to provide a much simpler and reliable thermal protective circuit.

Regarding claim 12, Peiser et al. in view of Schempp and in view of Robel et al. and Streater discloses the system of claim 10, wherein the thermal fuse (Streater, Fig. 10, 79) comprises a PTC resistor (Streater, Fig. 10, 81), and the element with a threshold voltage and current comprises two zener-diodes (Streater, Fig. 9, 72, 73) in a push-pull connection with one another.

Regarding claim 13, Peiser et al. in view of Schempp and in view of Robel et al. and Streater discloses the system of claim 10, wherein the thermal fuse is a PTC resistor (Streater, Fig. 10, 81), and the element with a threshold voltage and current comprises a varistor (Streater, , Fig. 9, 71).

Regarding claim 14, Peiser et al. in view of Schempp and in view of Robel et al. and Streater discloses the system of claim 10, wherein the thermal fuse is a thermal fuse in the form of a bimetallic circuit breaker (Streater, Fig. 9, 69), and the element with a threshold voltage and current characteristic is a varistor (Streater, Fig. 9, 71).

Response to Arguments

Applicant's arguments filed October 15, 2008 have been fully considered but they are not persuasive.

Regarding Applicant's argument, see pages 6 and 7 of the remarks, that if the Peiser system already has over-current protection, there is no motivation to add the components (PTC resistor 24 and LED 23) of Schempp to the Peiser system. First, the Examiner will like to point out to the Applicant's that PTC resistor 24 recited in Applicant's arguments was not relied upon in the rejection. The Examiner relied upon Fig. 1, elements (PTC resistor (21), diode (23), and resistor (25). Secondly, in response to Applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the motivation to modify the protective switching devices of Peiser et al. with the protective circuit as taught by Schempp, is to provide a reliable and more sensitive overcurrent fault protection circuit. Peiser et al. overcurrent switching devices including relay contacts (rr, rs, rt), which has a disadvantage of becoming mechanical worn out from opening and closing during overcurrent faults.

Regarding Applicant's argument, see pages 6 and 7 of the remarks, that Peiser teaches that the use of an element with a threshold voltage and current characteristic is

not satisfactory. In other word, Peiser teaches away from adding an element with a threshold voltage and current characteristic. However, the Examiner disagrees with the Applicant's assessment because Peiser only discloses a disadvantage in using a non-votlage-dependent (non-linear) element by itself is not satisfactory in the protective system. However, the protective circuit as disclosed by Schempp, is a series combination of a voltage-depent (non-linear), i.e. diode 23, PTC, and resistor which will provide a reliable and more sensitive overcurrent protection circuit.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TERRENCE R. WILLOUGHBY whose telephone number is (571)272-2725. The examiner can normally be reached on 8-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on 571-272-2084. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Terrence R Willoughby/

Examiner, Art Unit 2836

1/21/09

/Stephen W Jackson/

Primary Examiner, Art Unit 2836